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PATENT APPLICATION

ATTORNEY DOCKET NO. 10006721-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Kevin Collins

Confirmation No.: 2538

Application No.: 09/858,080

Examiner: BATURAY, Alicia

Filing Date: May 16, 2001

Group Art Unit: 2185

Title: Method and Apparatus to Manage Transactions at a Network Storage Device

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on June 27, 2006.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) $500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

☐ 1st Month $120	☐ 2nd Month $450	☐ 3rd Month $1020	☐ 4th Month $1590

☐ The extension fee has already been filed in this application.

☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of $ 500. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No.	09/858,080
Filing Date	May 15, 2001
Inventorship	Kevin Collins
Applicant	Hewlett-Packard Company
Group Art Unit	2155
Examiner	Baturay, Alicia
Confirmation No.	2538

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I. REAL PARTY IN INTEREST

The real party in interest for this appeal is Hewlett-Packard Development Company, L.P., a Texas Limited Partnership having its principal place of business in Houston, Texas.

II. RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There are 21 claims pending in this application (Claims 1-21).

B. Current Status of Claims

1. Claims canceled: None
2. Claims withdrawn from consideration but not canceled: None
3. Claims pending: 1-21
4. Claims allowed: None
5. Claims rejected: 1-21

C. Claims on Appeal

The claims on appeal are claims 1-21.

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IV. STATUS OF AMENDMENTS

Appellant did not amend the claims in the most recent Response filed on February 1, 2006. Therefore the claims on appeal (as reflected in the claim appendix) are the claims presented in the most recent Response filed on February 1, 2006.

V. SUMMARY OF CLAIMED SUBJECT MATTER

According to claim 1, a method for managing transactions (200-202 in FIG. 2; p. 7, l. 29 - p. 8, l. 12; p. 8, l. 26 - p. 13, l. 5; p. 14, ll. 14-17) at a network storage device (20 in FIG. 1-3; p. 6, l. 1 – p.7, l. 28; p. 8, ll. 13-25). The method comprising receiving an incoming transaction (200 in FIG. 2) at said network storage device (20 in FIG. 1-3). The method also comprising assigning a priority (320 in FIG. 4; Table 3 on p.11; p. 11, l. 7 p.12, l. 26) to said incoming transaction (200 in FIG. 2) relative to other incoming transactions (200 in FIG. 2) at said network storage device (20 in FIG. 1-3) based at least in part on a usage policy (250 in FIG. 4; p. 6, l. 13 - p. 7, l. 3; p. 7, l. 29 - p. 9, l. 1; p. 10, l. 25 - p. 11, l. 10; p. 13, ll. 1-26; p. 14, l. 25 - p. 15, l. 9).

According to claim 5, a method for managing transactions (200-202 in FIG. 2; p. 7, l. 29 - p. 8, l. 12; p. 8, l. 26 - p. 13, l. 5; p. 14, ll. 14-17) at a network storage device (20 in FIG. 1-3; p. 6, l. 1 – p.7, l. 28; p. 8, ll. 13-25). The method comprising generating a usage policy (250 in FIG. 4; p. 6, l. 13 - p. 7, l. 3; p. 7, l. 29 - p. 9, l. 1; p. 10, l. 25 - p. 11, l. 10; p. 13, ll. 1-26; p. 14, l. 25 - p. 15, l. 9) for said network storage device (20 in FIG. 1-3). The method also comprising distributing said usage policy (250 in FIG. 4) to said network storage device (20 in FIG. 1-3) for prioritizing (320 in FIG. 4; Table 3 on p.11; p. 11, l. 7 - p.12, l. 26) a plurality of incoming transactions (200-202 in FIG. 2) received at said network storage device (20 in FIG. 1-3) relative to one another.

According to claim 8, an apparatus for managing a plurality of incoming transactions (200-202 in FIG. 2; p. 7, l. 29 - p. 8, l. 12; p. 8, l. 26 - p. 13, l. 5; p. 14, ll. 14-17) at a network storage device (20 in FIG. 1-3; p. 6, l. 1 – p.7, l. 28; p. 8, ll. 13-25). The apparatus comprising computer readable storage medium at said network storage device (20 in FIG. 1-3). The apparatus also comprising a usage policy (250 in FIG. 4; p. 6, l. 13 - p. 7, l. 3; p. 7, l. 29 - p. 9, l. 1; p. 10, l. 25 - p. 11, l. 10; p. 13, ll. 1-26; p. 14, l. 25 - p. 15, l. 9) stored on said computer readable storage medium. The apparatus also comprising computer readable program code residing in said computer readable storage medium, comprising program code for prioritizing (320 in FIG. 4; Table 3 on p.11; p. 11, l. 7 - p.12, l. 26) said plurality of incoming transactions (200 in FIG. 2) relative to one another based on said usage policy (250 in FIG. 4).

According to claim 13, an apparatus for managing a plurality of incoming and outgoing transactions (200-202 in FIG. 2 and 205 in FIG. 3; p. 7, l. 29 - p. 8, l. 12; p. 8, l. 26 - p. 13, l. 5; p. 14, ll. 14-17) at a network storage device (20 in FIG. 1-3; p. 6, l. 1 – p.7, l. 28; p. 8, ll. 13-25). The apparatus comprising computer readable storage medium. The apparatus also comprising computer readable program code residing in said storage medium, including program code for defining a usage policy (250 in FIG. 4; p. 6, l. 13 - p. 7, l. 3; p. 7, l. 29 - p. 9, l. 1; p. 10, l. 25 - p. 11, l. 10; p. 13, ll. 1-26; p. 14, l. 25 - p. 15, l. 9) for prioritizing (320 in FIG. 4; Table 3 on p.11; p. 11, l. 7 - p.12, l. 26) said plurality of incoming and outgoing transactions (200-202 in FIG. 2 and 205 in FIG. 3) relative to one another.

According to claim 20, an apparatus for managing a number of incoming and outgoing transactions (200-202 in FIG. 2 and 205 in FIG. 3; p. 7, l. 29 - p. 8, l. 12; p. 8, l. 26 - p. 13, l. 5; p. 14, ll. 14-17) at a network storage device (20 in FIG. 1-3; p. 6, l. 1 – p.7, l. 28; p. 8, ll. 13-25). The apparatus comprising means (30 in FIG. 1 and 2; p. 7, l. 29 - p. 8, l. 2; p. 10, ll. 25-30) for

reading meta data from said number of incoming and outgoing transactions (200-202 in FIG. 2 and 205 in FIG. 3) at said network storage device (20 in FIG. 1-3). The apparatus also comprising means (250 in FIG. 4; p. 6, l. 13 - p. 7, l. 3; p. 7, l. 29 - p. 9, l. 1; p. 10, l. 25 - p. 11, l. 10; p. 13, ll. 1-26; p. 14, l. 25 - p. 15, l. 9) and (320 in FIG. 4; Table 3 on p.11; p. 11, l. 7 - p.12, l. 26) for prioritizing said number of incoming and outgoing transactions (200-202 in FIG. 2 and 205 in FIG. 3) based at least in part on said meta data, wherein said prioritizing means (250 and 320 in FIG. 4) resides at said network storage device (20 in FIG. 1-3).

And according to dependant claim 21, the apparatus further comprising means (275 in FIG. 2; p. 11, l. 17 - p. 13, l. 5) for transmitting said number of transactions (200-202 in FIG. 2 and 205 in FIG. 3; p. 7, l. 29 - p. 8, l. 12; p. 8, l. 26 - p. 13, l. 5; p. 14, ll. 14-17) based at least in part on a priority (320 in FIG. 4; Table 3 on p.11; p. 11, l. 7 - p.12, l. 26) thereof.

The summary is set forth in several exemplary embodiments that correspond to the independent claims. Dependent claim 21 containing means plus function is also summarized above. Discussions about elements and recitations of the independent claims can be found at least at the cited locations in the specification and drawings.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The Final Office Action dated April 12, 2006 rejected claims 1, 4, 5, 8, 13, 14, and 16-29 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,640,278 to Nolan, et al. (hereinafter referred to as "Nolan") in view of U.S. Patent Publication No. 2001/0039576A1 to Kanada (hereinafter referred to as "Kanada"). The Final Office Action also rejected claims 2, 6, 9, and 15 under 35 U.S.C. §103(a) as being unpatentable over Nolan and Kanada and further in view of an article by Gibson, et al. entitled "Network Attached

Storage Architecture" (2000) (hereinafter referred to as "Gibson"). The Final Office Action also rejected claims 3, 7, 10, 11, 20, and 21 under 35 U.S.C. §103(a) as being unpatentable over Nolan and Kanada and further in view of an article by Comer entitled "Internetworking with TCP/IP" (1995) (hereinafter referred to as "Comer"). The Final Office Action also rejected claim 12 under 35 U.S.C. §103(a) as being unpatentable over Nolan and Kanada and further in view of an article by Mahon, et al. entitled "Requirements for a Policy Management System" (1999) (hereinafter referred to as "Mahon"). Appellant requests the Board to review each of these grounds of rejection.

VII. ARGUMENT

It is well settled that three basic criteria must be met to support a rejection under 35 U.S.C. §103(a). First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art cited must teach or suggest all the claim limitations. *See* M.P.E.P. §2143.

Claim Rejections - 35 U.S.C. 103(a) - Nolan and Kanada

The Examiner rejected claims 1, 4, 5, 8, 13, 14, and 16-19 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,640,278 to Nolan et al. (hereinafter referred to as "Nolan") in view of U.S. Patent Publication No. 2001/0039576 to Kanada (hereinafter referred to as "Kanada").

Independent Claim 1

Claim 1 positively recites "receiving an incoming transaction at said network storage device" and "assigning a priority to said incoming transaction relative to other incoming transactions at said network storage device based at

least in part on a usage policy" (emphasis added). Nolan discloses indicating a relative priority of a background hot copy process with respect to the data access requests from the client processor. Kanada discloses a network policy transmission method from a policy server to a network node. Both references fail to teach or suggest at least the recitations of claim 1.

The Examiner cites to col. 27, lines 65-67 and col. 28, line 66 to col. 29, line 35 in Nolan as disclosing these recitations. These citations discuss handling of the background hot copy process. At col. 27, lines 65-67, Nolan discloses assigning a priority to the hot copy process relative to fulfilling data access requests from the client processor. At col. 28, line 66 to col. 29, line 35, Nolan discloses accepting user input to initiate a hot copy process. However, the user input is not an incoming transaction that is prioritized relative to other incoming transactions. Therefore, these recitations fail to disclose assigning priority to any of the incoming transactions relative to the other incoming transactions.

In the Final Office Action, the Examiner attempts to explain that the hot copy process is initiated by a user, and therefore is a transaction. Applicant disagrees. It is well understood in the computer arts that processes and transactions are not the same thing.

For at least the foregoing reasons, the Examiner has failed to establish that independent claim 1 is unpatentable over Nolan in view of Kanada.

Dependent Claim 4

Claim 4 depends from claim 1, which is believed to be allowable. Therefore, claim 4 is also believed to be allowable for at least the same reasons as claim 1.

Independent Claim 5

Claim 5 positively recites "distributing said usage policy to said network storage device for prioritizing a plurality of incoming transactions received at said network storage device relative to one another" (emphasis added). The Examiner again cites to col. 28, line 66 to col. 29, line 35 in Nolan. However, this citation fails to disclose at least these recitations as discussed above for claim 1. Therefore, claim 5 is believed to be allowable.

For at least the foregoing reasons, the Examiner has failed to establish that independent claim 5 is unpatentable over Nolan in view of Kanada.

Independent Claim 8

Claim 8 positively recites "program code for prioritizing said plurality of incoming transactions relative to one another based on said usage policy". (emphasis added). The Examiner again cites to col. 28, line 66 to col. 29, line 35 in Nolan. However, this citation fails to disclose at least these recitations as discussed above for claim 1.

For at least the foregoing reasons, the Examiner has failed to establish that independent claim 8 is unpatentable over Nolan in view of Kanada.

Independent Claim 13

Claim 13 positively recites "program code for defining a usage policy for prioritizing said plurality of incoming and outgoing transactions relative to one another" (emphasis added). The Examiner again cites to col. 28, line 66 to col. 29, line 35 in Nolan. However, this citation fails to disclose at least these recitations as discussed above for claim 1.

For at least the foregoing reasons, the Examiner has failed to establish that independent claim 13 is unpatentable over Nolan in view of Kanada.

Dependent Claims 14 and 16-19

Claims 14 and 16-19 depend from claim 13, which is believed to be allowable. Therefore, claims 14 and 16-19 are also believed to be allowable for at least the same reasons as claim 13.

Claim Rejections - 35 U.S.C. 103(a) - Nolan, Kanada, and Gibson

The Examiner rejected claims 2, 6, 9, and 15 under 35 U.S.C. 103(a) as being unpatentable over Nolan in view Kanada and further in view of the reference entitled "Network Attached Storage Architecture" by Gibson, et al. (hereinafter referred to as "Gibson").

Dependent Claims 2, 6, 9, and 15

Claim 2 depends from claim 1, which is believed to be allowable as discussed above. Claim 6 depends from claim 5, which is believed to be allowable as discussed above. Claim 9 depends from claim 8, which is believed to be allowable as discussed above. Claim 15 depends from claim 13, which is believed to be allowable as discussed above. Gibson also fails to discuss at least these recitations. Therefore, claims 2, 6, 9, and 15 are also believed to be allowable for at least the same reasons as the base claims.

Claim Rejections - 35 U.S.C. 103(a) - Nolan, Kanada, and Comer

The Examiner rejected claims 3, 7, 10, 11, 20, and 21 under 35 U.S.C. 103(a) as being unpatentable over Nolan in view Kanada and further in view of

the reference entitled "Internetworking with TCP/IP" by Comer (hereinafter referred to as "Comer").

Dependent Claim 3

Claim 3 depends from claim 1, which is believed to be allowable. Comer also fails to discuss at least the recitations in claim 1. Therefore, claim 3 is also believed to be allowable for at least the same reasons claim 1.

Dependent Claim 7

Claim 7 depends from claim 5, which is believed to be allowable. Comer also fails to discuss at least the recitations in claim 5. Therefore, claim 7 is also believed to be allowable for at least the same reasons claim 5.

Furthermore, claim 7 positively recites "said usage policy comprises a number of rules, each including meta data and a corresponding priority." The Examiner relies on Figure 4A and the discussion in paragraph 21 of Kanada. Figure 4A includes a rule type "Scheduling" which points to table E in Figure 4B indicating the parent scheduling label is PrioritySchedul. PrioritySchedul is a scheduling method or algorithm that may be implemented, but is not a priority in itself. See, e.g., page 5, paragraph 0086. Paragraph 0021 discusses adding, removing, or updating rules, but does not disclose rules including meta data and a corresponding priority. The Examiner also relies on Figure 3B (element 381) and the discussion in paragraph 152 of Kanada. Figure 3B and paragraph 152 reference disclose that the parent scheduling label is PrioritySchedul, but again this is a scheduling method or algorithm, not a priority in itself. None of these citations teach or suggest the recitations of claim 7.

In the Final Office Action, the Examiner explains that in Kanada, rules that will be used in dependent rules must be executed before those dependent rules, and therefore the independent rules must have priority of execution over the dependent rules. Applicant disagrees that ordering rules based on dependencies discloses a priority corresponding to meta data in a usage policy.

Claim 7 is believed to be allowable on these separate grounds.

Dependent Claim 10

Claim 10 depends from claim 8, which is believed to be allowable as discussed above. Comer also fails to discuss at least the recitations in claim 8. Therefore, claim 10 is also believed to be allowable for at least the same reasons as claim 8.

In addition, claim 10 positively recites "said usage policy comprises a number of rules which define a number of priorities for a number of meta data" and "program code assigns one of said priorities to one of said transactions when said transaction satisfies at least one of said rules." As discussed above for claim 7, the citations relied upon in the Examiner disclose a scheduling algorithm, but do not disclose rules which define a number of priorities.

Claim 7 is believed to be allowable on these separate grounds.

Dependent Claim 11

Claim 11 depends from claim 8, which is believed to be allowable as discussed above. Comer also fails to discuss at least the recitations in claim 8. Therefore, claim 11 is also believed to be allowable for at least the same reasons as claim 8.

Independent Claim 20

Claim 20 positively recites "means for prioritizing said number of incoming and outgoing transactions based at least in part on said meta data, wherein said prioritizing means resides at said network storage device." Nolan and Kanada fail to teach or suggest at least these recitations as discussed above for claim 1. Comer also fails to discuss at least the recitations in claim 20.

For at least the foregoing reasons, the Examiner has failed to establish that independent claim 20 is unpatentable over Nolan in view of Kanada and further in view Comer.

Dependent Claim 21

Claim 21 depends from claim 20, which is believed to be allowable as discussed above. Therefore, claim 21 is also believed to be allowable for at least the same reasons as claim 20.

Claim Rejections - 35 U.S.C. 103(a) - Nolan, Kanada, and Mahon

The Examiner rejected claims 12 under 35 U.S.C. 103(a) as being unpatentable over Nolan in view Kanada and further in view of the reference entitled "Requirements for a Policy Management System" by Mahon, et al. (hereinafter referred to as "Mahon").

Dependent Claim 12

Claim 12 depends from claim 8, which is believed to be allowable as discussed above. Mahon also fails to discuss at least the recitations in claim 8. Therefore, claim 12 is also believed to be allowable for at least the same reasons as claim 8.

Conclusion

For the reasons provided herein, Appellant respectfully requests the Board to rule that the rejections of the claims are improper.

Respectfully Submitted,

Dated: July 25, 2006 By: Mark D. Trenner

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VIII. CLAIMS APPENDIX

1. A method for managing transactions at a network storage device, comprising:

receiving an incoming transaction at said network storage device; and

assigning a priority to said incoming transaction relative to other incoming transactions at said network storage device based at least in part on a usage policy.

2. A method as in claim 1, further comprising receiving said usage policy at said network storage device, and wherein said network storage device is a NAS device.

3. A method as in claim 1, further comprising:

reading meta data from said transaction; and

comparing said meta data to a number of rules defined in said usage policy, wherein assigning said priority to said transaction is based on at least part of said meta data satisfying at least one condition of said number of rules.

4. A method as in claim 1, further comprising ordering said transaction among other transactions in a queue at said network storage device.

5. A method for managing transactions at a network storage device, comprising:

generating a usage policy for said network storage device; and

distributing said usage policy to said network storage device for prioritizing a plurality of incoming transactions received at said network storage device relative to one another.

6. A method as in claim 5, further comprising identifying said network storage device on a network, and wherein said network storage device is a NAS device.

7. A method as in claim 5, wherein said usage policy comprises a number of rules, each including meta data and a corresponding priority.

8. An apparatus for managing a plurality of incoming transactions at a network storage device, comprising:

computer readable storage medium at said network storage device;

a usage policy stored on said computer readable storage medium; and

computer readable program code residing in said computer readable storage medium, comprising program code for prioritizing said plurality of incoming transactions relative to one another based on said usage policy.

9. An apparatus as in claim 8, wherein said computer readable program code is a software agent, and wherein said network storage device is a NAS device.

10. An apparatus as in claim 8, wherein said usage policy comprises a number of rules which define a number of priorities for a number of meta data, wherein said program code assigns one of said priorities to one of said transactions when said transaction satisfies at least one of said rules.

11. An apparatus as in claim 8, wherein said transactions are packetized signals comprising at least one data field and at least one meta data field, wherein said program code reads said at least one meta data field and orders said transactions among other transactions in a queue based on said at least one meta data field satisfying a condition of a rule in said usage policy.

12. An apparatus as in claim 8, wherein said usage policy comprises a number of default rules.

13. An apparatus for managing a plurality of incoming and outgoing transactions at a network storage device, comprising:

computer readable storage medium; and

computer readable program code residing in said storage medium, including program code for defining a usage policy for prioritizing said plurality of incoming and outgoing transactions relative to one another.

14. An apparatus as in claim 13, wherein said computer readable program code resides at a policy management server and further comprises program code for distributing said usage policy to said network storage device.

15. An apparatus as in claim 13, wherein said computer readable program code further comprises program code for identifying said network storage device, and wherein said network storage device is a NAS device.

16. An apparatus as in claim 13, wherein said computer readable program code further comprises program code for prioritizing said transactions based on said usage policy.

17. An apparatus as in claim 16, wherein said computer readable program code further comprises:

program code for installing on a policy management server, said program code for defining a usage policy; and

program code for installing on said network storage device, said program code for prioritizing said transactions.

18. An apparatus as in claim 13, wherein said transactions are incoming transactions to said network storage device.

19. An apparatus as in claim 13, wherein said transactions are outgoing transactions from said network storage device.

20. An apparatus for managing a number of incoming and outgoing transactions at a network storage device, comprising:

means for reading meta data from said number of incoming and outgoing transactions at said network storage device; and

means for prioritizing said number of incoming and outgoing transactions based at least in part on said meta data, wherein said prioritizing means resides at said network storage device.

21. An apparatus as in claim 20, further comprising means for transmitting said number of transactions based at least in part on a priority thereof.

IX. EVIDENCE APPENDIX

Not applicable.

X. RELATED PROCEEDINGS APPENDIX

Not applicable.